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ABSTRACT

The report documents a study conducted in 1979 by the University of Alaska's Cross-Cultural Education Development Program (X-CED) to use video tape to study the interaction of teachers and students and to look specifically at the teaching styles of the three Athabaskan teachers at an Interior Alaska Athabaskan community school. The study would then provide information that would be helpful for faculty and students in the development of guidelines and materials for the X-CED teacher training program. Videotaping was done on three different occasions over a time period of 2 months in each of the three classrooms using a portable reel-to-reel black and white video camera. Approximately 12 hours of tape were collected from each classroom, of which samples were selected for reviewing and analyzing. Study findings included: Native teachers are without question "teachers" according to the definition of the term; teaching styles were similar to the ways described in educational studies; teachers' repertoires included directives, spotlighting, and reprimands, but were used less frequently, and rules for using them were different; and teachers' personal relationships with the students did not interfere with their expectations that students do well academically. An example of score transcript from a classroom vocabulary lesson concludes the document. (ERB)

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FINAL REPORT

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NATIONAL INSTITUTE OF EDUCATION, GRANT NIE-G-80-0064

The Social Organization of Participation in Three Athabaskan Cross-Cultural Classrooms

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December 21, 1981

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"Tuning-In"

Athabaskan Teachers and Athabaskan Students

The Russians first introduced "schooling" to Alaska in 1785. Since that time, a wide variety and large number of people have journeyed far from home to teach in remote Alaskan schools. Missionary zeal, the lure of high salaries, or a quest for adventure were often the motivating forces responsible for the steady influx of teachers to Alaska from "Outside." Today, nearly 200 years after the first schools opened, the vast majority of teachers in Alaska's rural communities continue to come from places outside of Alaska.

The importation of teachers from outside the state has had its advantages and disadvantages. Teachers from somewhere else usually bring with them new perspectives, new ideas, and very often a great deal of enthusiasm. However, these qualities are almost invariably dampened and diffused by the reality of long harsh winters and the prolonged isolation from familiar people, places and goods that these transplanted teachers face. These adjustments to the physical environment are minor, however, compared to the complications that are created by the fact that Alaska is composed of many diverse groups of people whose cultural backgrounds often differ radically from those of a teacher from Outside. It doesn't take teachers long to discover that their own value system, life style and way of teaching and learning are often not shared or even appreciated by the students and families in the communities they are trying to serve.

This discovery can quickly lead to feelings of frustration, anger, inadequacy and anxiety for teachers and students, which in turn often leads to dropping out--both by teachers and students. The annual turnover rate for teachers in Alaska's rural schools is notoriously high, and school attendance and test score statistics indicate that high numbers of rural students continue to tune out, both physically and mentally, long before the schools are ready to turn them out. No one has been able to paint a consistently positive picture of education anywhere in rural Alaska.

A question that has been debated for many years by parents, teachers, school officials and teacher training institutions is: "Would some of the problems related to teaching in rural Alaskan schools be relieved if local people were available to teach in their own communities"? Until recently, answers to this question have been purely hypothetical however, because only a handful of local people were teaching in bush communities. ("Local" people in rural Alaska are primarily Native people, including Aleuts, Eskimos and Indians.) It is only within the last few years that social, economic and political forces have brought about opportunities for a significant number of Alaska Native people to receive education degrees and become bona-fide, certified teachers. Today there are approximately fifty Native people teaching in rural Alaska. This is of course only a proverbial "drop in the bucket" when one realizes there are well over a thousand teachers in rural Alaska, but it is a significant first drop nonetheless.

The small but growing cadre of Native teachers finally makes it possible to do more than speculate about the effects of local hire in rural schools. We are now able to begin to examine more directly some of the unanswered questions about the contributions that local/Native teachers can make to the schooling processes in their own communities. The purpose of this paper is to describe the preliminary findings of one study that attempts to address those questions.

An Athabaskan School

At the beginning of the 1979-80 school year, an elementary school in an Interior Alaska Athabaskan community opened its doors for its eleventh year of operation as a state-supported school (schools existed in the community since 1889 but had been operated previously by the Bureau of Indian Affairs and the Catholic Church). The three Native teachers, who comprised the faculty of the elementary school, were returning to the same positions they had held for the past four years. They were members of the community--two Athabaskan women and one Athabaskan man. The school was the only multi-teacher school in Alaska where all of the teachers were Native. This fact alone made the school interesting, but far more intriguing to many people was the fact that schooling in this community appeared to be working. Students were performing well by nearly all traditional standards. Test scores were on or above the national average and were higher than in past years; attendance was good; discipline problems were not an issue; and students were eager and active participants in class activities. Even the time-on-task standards called for by several back-to-basic educators today were being met in this school. Casual observers could easily see that teachers and students were spending a lot of time doing the tasks that one is supposed to do in school. Teachers were spending a high proportion of time working with students on academic tasks and only a small amount of time doing classroom management (organizing, disciplining, housekeeping, etc.). Students likewise were spending most of their time-on-tasks doing the kinds of things we generally expect students to do: studying math, reading, writing, etc. The general picture was one of a school running smoothly and successfully, but it was not immediately apparent just how this smoothness and succes was being achieved. What were these teachers doing to get the students so tuned-in to the schooling process?

Organizing the Project

One group of people with a keen interest in knowing more about the schooling process in classrooms taught by Alaska Native teachers was the University of Alaska's Cross-Cultural Education Development Program (X-CED). X-CED is a program designed specifically to train Native people to become teachers. Since its beginning in 1970, sixty Alaska Native people have earned bachelor's degrees in cross-cultural education.

In January of 1979, we submitted a proposal to the National Institute of Education (NIE) to request support for a study which would allow us to use video tape to study the interaction of teachers and students and to look specifically at the teaching styles of the three Athataskan teachers in the school described above. The purpose of the study was to gather

information that would be helpful for faculty and students in the development of guidelines and materials for the X-CED teacher training program. The proposal was funded by NIE, so, with the support and encouragement of the community and the teachers, in February of 1980, Wendy moved temporarily to the community in order to begin the process of classroom video taping. Since the funding and timeline of this study were limited, there was no attempt made to formally document or study any activities outside the classroom.

Video taping was done on three different occasions over a time period of two months in each of the three classrooms. Using a portable reel-to-reel black and white video camera, approximately twelve hours of tape were collected from each classroom.

After completing the video taping, Wendy returned to her teaching position in another village and began the process of viewing and analyzing the tapes. Working with her were two consultants, Fred Erickson from the University of Michigan and Ron Scollon from the University of Alaska, and Carol as a graduate assistant. The three classroom teachers were not formally involved in the process of viewing and analyzing the tape, though they have been highly supportive of the project and have been informally involved and consulted throughout its development. Several other people interested in education in rural Alaska contributed ideas and suggestions that are included in this report. Since many of the observations were done collectively in a seminar, there has been no attempt to credit any one individual. The interpretations presented here are the responsibility of the authors.

Working With Video Tape

The use of video tape for examing classroom interaction is a powerful tool that can aid anyone who is interested in learning more about teaching and learning. We found it to be especially useful for this particular study for the following reasons:

1) Using video tape allowed us to work with the same data both individually and as a group. With some members living several hundred miles away from others, this was necessary for the survival and success of the project

2) Since it was not possible (and rarely ever is) for all of the interested people to actually spend time in the community and in the classroom, the video tapes provided us with a way of capturing and preserving the classroom experience in a form that was as close to the original as possible. It offered us a sample of classroom experiences that we felt comfortable calling "real" since it would be extremely difficult for any teacher or student to role play or "put on a show" for six hours of continuous video taping

3) The use of video tapes has provided us with a valuable teaching and learning tool because our original material is preserved in

such a way that with appropriate permission, it can now be used by others to generate more ideas and to verify or negate the ideas presented in this report

4) The medium of video tape allowed us to look "beneath the surface" and make observations about behavior that would not have been possible without video tape. The video tapes provided us with a real-time picture of activities in the classrooms and they allowed us to go over the same material again and again in a comprehensive way.

Erickson, Mehan, Van Ness and the Colliers (see bibliography) have all used video tape or film to study classrooms, and their writings provide extensive discussions of the advantages and disadvantages of the use of this medium in schools.

The Process of Viewing and Analyzing

Since viewing and analyzing video tapes is an extremely time-consuming process, our first task as a group was to limit the number of tapes we chose to work with. There was a wide range in the quality of the tapes themselves (caused by changes in the lighting in the rooms, malfunctioning of equipment, changing positions of teachers and students, etc.), so some of the decisions on which of the 36 hours of tape to use were easy to make. We decided to select samples from each of the three classrooms that would provide us with a wide range of classroom activities. Written transcriptions were made of some sections of the tapes (another very time-consuming process) and a few of these were selected for focused and in-depth study. The information presented in this report is based primarily on the discussions and hypotheses produced by repeated viewings of these few sections of tape, supplemented by the general insights gained from a more superficial review of all of the tapes.

We view this report as an initial, tentative presentation of ideas about teaching and learning in these particular classrooms, and we hope that it will be used to generate further work with the same material and/or to encourage others to use video tape to examine classrooms.

First Impressions

Our first viewings of the tapes left some of us feeling bewildered and disappointed. Those of us who were novice video-viewers saw nothing that looked particularly exciting, new or dramatic in the teaching styles of these Native teachers: the classrooms appeared fairly routine and regular.

Some situations were obviously different from those usually described in educational literature, but these were basically a reflection of the fact that this was a small, rural school rather than a large, urban one. For instance, each teacher's room was comprised of students from two different grade levels (first/second, third/fourth, fifth/sixth); the total number of students in each room was small (12, 14, 11); one teacher shared a partitioned room with the Kindergarten teacher.

Other than these differences based largely on the size of the school and community, there was nothing that leaped out at us to suggest any radical departure in teaching style from what one would expect to see in most classrooms with non-Native teachers. These three teachers seemed to be doing the regular routines of "school teaching." They were having reading lessons with small groups of students; they were putting math problems on chalkboards for students seated at work tables; they were grading dittoed work sheets as they sat at their desks, and they were working with and around teacher aides. In all of these activities they were using standard curriculum materials.

Even the physical appearance of the classrooms gave no hint of any dramatic differences. The teachers' desks were in the front of the rooms, number and letter charts were in place above the chalkboard, and pencil sharpeners, phonographs and bookshelves could be easily seen. There were no fancy learning centers, no unusual arrangements of desks and chairs (the students sat at tables) and there were no big eye-catching posters or bulletin board displays.

From our own base of reference drawn from our personal experiences as teachers, our professional and personal associations with other teachers, information provided by the educational research literature, and a baseline gathered from watching other classroom video tapes, we were initially inclined to think of the teaching styles of these three Native teachers as basically standard or traditional.

With our initial focus of attention on the teachers and the classroom itself it was easy to overlook the fact that the students in these rooms were also acting very much like students are supposed to, but not like Native students are supposed to, at least according to most of the studies done on Native American students in educational settings. The students in these classrooms did not fit the stereotype of the passive, shy, withdrawn or quiet Native student. Instead, they were eager and anxious to participate. They volunteered answers in math, they talked "loud enough," they raised their hands, they read aloud and real well, and they even asked many questions.

It became apparent to us that it was the superficial similarities in the classrooms that were immediately obvious, but the more significant differences were yet to be discovered beneath the surface. We were seeing Native teachers using what appeared to be very conventional ways of teaching while at the same time we were seeing Native students responding in very unconventional ways. They were participating, achieving, laughing, learning, and feeling comfortable. We began to sense that something quite subtle and significant was occurring in these teacher-student interactions, but it suprised us to see nothing particularly novel in our first glimpses of these "Native" teaching styles.

Tuning-In

Using the video tapes as our primary data base, we began to look again and again at small segments of tape where there appeared to be a considerable amount of teacher-student interaction. We began to focus on the subtle kinds of behavior teachers used as they interacted with students. We examined what they were actually doing on a minute-by-minute and second-by-second basis. During this process we began to sense that these teachers had an uncanny ability to know and understand their students, and we found ourselves repeatedly using the term "tuning-in" to describe several different kinds of teacher-student behaviors. We saw tuning-in as an ability of the teacher to adapt to the worlds of the students and we began to see evidence of this tuning-in at several levels. We saw teachers tuning-in rhythmically with their speech and body movements, tuning-in by listening, and tuning-in specifically to individual students. Somehow, these teachers were tuning-in in a way that prevented their students from being "turned-off" by the school process.

From the video tape analysis, we are able to provide examples and descriptions of some of the ways used by the teachers to tune-in to their students. Of course it is not possible to establish that there is a direct cause and effect relationship between what we call tuning-in behavior and student success, but we can say that there is a good possibility that the behaviors we've called tuning-in are important to the success of the teacher-student interaction. With this information, it would now be possible to set up more systematic and controlled studies with Native and non-Native teachers to see if correlations between some of the identified behaviors and the success rate of students actually do exist.

The following examples have been chosen from among several in the tapes. Some describe one teacher whereas others describe all three. There were certainly important variations among the teachers, but the similarities seemed to be more significant than the differences. Since two female teachers and one male teacher were involved in the study, both masculine and feminine pronouns are used throughout the report. They are used arbitrarily, however, in order to avoid identification of any one particular teacher.

Please note that it is extremely difficult to convey in a written medium something which can be very powerful and obvious in a visual or audio medium.

Rhythm and Talk

Rhythm in human speech and rhythm in human body movement is a phenomenon that has been examined by many people. Today there is a growing body of literature that explores the relationship between different kinds of rhythms and the outcomes of social interaction. Fred Erickson and Ron Scollon, both consultants on this study, have contributed significantly to the literature by examining the relationships between speech and body rhythms of participants in an interaction and the success or failure to communicate effectively.

In this classroom project we were interested in finding out more about the rhythm patterns of the teachers and students. We wanted to know whether

it was possible that the teacher's ability to tune-in was enhanced by the sharing of certain rhythm patterns. We decided to look at and listen to the rhythm patterns of the teachers and students to see if we could establish any connections between rhythm and success or failure in communicating. In thinking about rhythm, we relied heavily upon both the professional and personal knowledge and experience of Erickson and Scollon. They helped to provide connections between the world of music and the world of everyday talk and everyday movement (i.e. walking, sitting, nodding, blinking). During discussion and analysis of the tapes we often found it useful to rely on some nontechnical musical terms to help us think about and describe some nonmusical kinds of behaviors. Several of these terms (ensemble, fine-tuning, jazz, conducting) are included in this report to provide a common base for discussion and in some instances to provide useful parallels from another form of rhythmic communication.

Erickson's work on rhythmicity (in press) has shown us that talk and non-verbal movement is rhythmically timed to a regular tempo. Both he and Scollon have shown us that "in ordinary talk, people speak to each other in a regular meter of regular beats and they time their entrances and exits to the rhythm of these beats." (Scollon, 1981 a: 6). Scollon sampled a wide variety of situations with people talking and found that "ordinary talk from a family breakfast to a play-by-play of a baseball game, from Groucho Marx to the narratives of Athabaskan tradition bearers, is rhythmically integrated in a fairly slow measure in 2/4 time" (1981 a: 13). Scollon and Erickson both agree that talk in all contexts is timed to an underlying tempo.

Erickson used his work on rhythmicity as a basis for studying teacher-student interaction at both an elementary and junior college level and found many situations in which people failed to understand one another because they were not in synchrony. For instance, he discovered that an elementary teacher who was giving an oral test to a child set up a regular rhythm and expected the child to answer on the beat she had established. When the child gave a correct answer that did not fall on the first beat (downbeat), the teacher ignored it. Instead, the teacher heard the word which did fall on the downbeat as the answer (which in this case was the wrong answer). "The child and teacher who do not achieve rhythmic synchrony fail to understand each other to the detriment of the child" (Erickson, 1980). The child who is out of synchrony with the teacher is often accused of poor reading ability.

In studies of junior college counseling interview, Erickson and his co-workers have found that a major factor in the outcome of communication between the counselor and the students is the rhythmic pattern of their interaction (Erickson and Shultz, in press).

In order for us to study the rhythm patterns of the students and teachers in the video tapes it was necessary to first understand the dimensions of "tempo" and what can be referred to as "density." Tempo is used in music to describe the speed of beats per minute. Most people are familiar with a metronome--the device used by musicians to establish a controlled beat. A metronome is used to mark the rate of spped at which music is to be played or sung and it can be set to mark any number of beats per minute (usually between 40 and 210). The chosen beat is called the tempo. When we listen for tempo we listen for the downbeat and the upbeat.

Density, on the other hand, can be used to refer to the number of notes, or for our purposes, the number of words per measure or per minute. A piece of music that tells a musician to play sixteen notes per measure is more "dense" than one which calls for playing four notes per measure. Two musical pieces can be played at the same tempo (maybe 88 beats per minute), but the piece that has a lot of sixteenth notes will give the impression of being a faster piece of music. We intuitively feel that music is fast or slow on the basis of density rather than tempo.

Silence is also a factor that must be considered when thinking about rhythm. It is necessary to count beats during silent periods and to consider the percentage of silence in any sample of speech that is considered.

Thus we see that the popular notion of rhythm is not really adequate for a detailed description of the rhythm of people's speech. We need to consider all of the different phenomena that constitute our intuitive sense of rhythm. We also need to remember that when we talk about rhythm in speech we are not using it as an analogy; we are saying that speech itself is rhythmical and it is possible to determine the tempo and density of all speech in all contexts. Scollon's discussion of tempo and density helps to clarify these notions.

> As in music, the underlying tempo is not to be confused with the rhythmic patterns superimposed on it. Some speakers superimpose a pattern of relatively few syllables per beat while others superimpose a pattern of a very high density. It came as a surprise to me to find that Groucho Marx, performing on his radio show, 'You Bet Your Life,' spoke in a very slow tempo (75.9 beats per minute). What gives the impression of rapid speech is the very high density of 4.62 words per measure. To trade on the parallel with music we can say that some speakers speak in quarter notes while others such as Groucho Marx speak in 32nd or even 64th notes. I find it useful to refer to this phenomenon as 'density' and to treat it as quite distinct from tempo (Scollon, 1981, page 7).

Rhythm in the Classroom

Our method for determining the tempo and density of the teachers' and students' talk was based on the methodology developed by Scollon (a detailed example of this method is attached). We found it much easier to work with a small audio tape than a bulky reel-to-reel video tape, so for this part of the study we dubbed the audio portion of the video tape onto an audio cassette tape. Our first step was to make full transcriptions of the segments we were analyzing and to then listen for the beats. We did this by listening for and marking the stressed and unstressed syllables.

Linguists define stressed syllables as those that are uttered with a higher or lower pitch, a stronger intensity, a slight lengthening, a purer vowel quality or some combination of these, but those of us who were not

trained as linguists found it possible to intuitively and correctly hear the stressed and unstressed syllables and thus to find the beat. (We could find the tempo and hear the beats faster and more easily when we used an adjusted tape recorder which allowed us to slow everything down by 20 percent.) We then counted all of the beats in our sample, used a stop-watch to check exactly the amount of real time that had elapsed (usually between two and five minutes), and figured out the number of beats per minute. Using our marking of stressed and unstressed syllables, we then determined measure length, and placed our written transcription into a format that resembled a musical score.

Included at the end of this report is a two and one-half minute section of the "score" from a vocabulary lesson with a teacher and four students. "T" represents the teacher, "S" represents the students, and "X" represents any word or sound that was not intelligible to us. Numbers over rest marks (e.g., 4) indicate the number of measures of silence at that time. The tempo of the interaction between the third/fourth grade teacher and the children in this tape sample was 91 beats per minute. In samples from the other two classrooms the tempos of the teacher-student interaction was 96 for the teacher with younger students and 82 for the teacher with older students. In order to gather some comparative information on tempos in other classrooms, we analyzed portions of audio tapes from reading lessons in the KEEP Project in Hawaii (Kamehameha Early Education Project) and from two Fairbanks primary classrooms. In the KEEP classroom the tempo was 89, and in the Fairbanks classrooms it was 74 and 76. The tempo was noticeably faster in the classrooms of the Native Alaskan teachers and the Native Hawaiian teacher. Since earlier studies have indicated that the tempo of childrens' natural talk is significantly faster than that of adults, it seems plausible to suggest that those teachers who spoke with a faster tempo were in fact adjusting their tempo to that of the students, whereas the teachers who used the slower tempo were requiring students to make the adjustment. In some classrooms students appear to set the tempo and in others the tempo is defined by the teacher.

Tempo is one aspect of rhythm that can show great variation not only between individuals but even within one individual. Thus it is not the high number of beats per minute itself that is as important as what this faster tempo represents. It suggests that these teachers have acknowledged and indicated to their students that they are willing to make adjustments in their own behaviors and are willing to "tune-in" to their students. These adjustments are certainly below anyone's level of conscious awareness, but we would suggest that they represent a certain predisposition about the role of a teacher in relation to a student. For these Native teachers, the teacher does not have to play the role of the pace-maker all the time.

In contrast to tempo the other dimensions of rhythm, density and silence seem to represent more of an individualistic (or perhaps ethnic) style of talking and thus cannot be used validly to tell us as much about the interaction itself.

Erickson and Scollon both use the term "rhythmic ensemble" to describe the state that is achieved when participants in an interaction are

communicating with a rhythm or tempo which is comfortable for both or all of them. (Ensemble in music is used to describe the integration or unity that musicians strive to achieve when they play together as members of a musical group.) Achieving ensemble allows participants to not only feel more comfortable, but to actually communicate more successfully with fewer misunderstandings. People who are in synchrony with one another can also predict more accuratley what will happen next. According to Scollon:

> Speakers time their entrances according to the tempo set by preceding speakers. After entering in that rhythm speakers often accelerate or retard their tempo to establish what is in effect a new tempo. It is very rare that any speaker will independently and arbitrarily begin speaking without first confirming the established tempo. Children at breakfast bang their spoons in the prevailing tempo. Radio emcees make their announcements in the tempo of their theme songs. Sometimes teachers time their instruction to the tempos of their students and sometimes they require their students to follow the teacher's tempo.
>
> Not only do stressed syllables express this rhythmic matrix, conversationalists also cough, sneeze, clear their throats, blow their noses, and laugh in rhythmic ensemble. Often after a long silence someone clears his or her throat in a gesture which predicts the following tempo as accurately as a conductor's silent 'one-two' before the orchestra's entrance (1981 b: 9).

Move to the Rhythm of Talk

These findings on different rhythm patterns inspired us to suggest some interpretations for other timing and talking behaviors we had observed on the video tapes.

We noted that students often were allowed to talk and provide answers to questions in their own time slots. A teacher would put a list of vocabulary words on the board and each child would be expected to read these aloud individually. (This was always preceded by a group reading of the words.) In each instance it was the child who set the pace for the oral listing of words; it was not the teacher's pointing stick that determined when the child would respond. Instead, the teacher adjusted to each child's individual tempo. We also observed that children often called out the answers to questions before the formal question was asked, and they were not penalized for doing so. (This answer-question format also occurred in the Odawa classrooms that Erickson and Mohatt studied.) We see these two behaviors as a reflection of the teacher's respect for the students' own tempo and timing. In another instance, a student independently selected a record for the class to listen to during a time when they were doing worksheets. The student, not the teacher, chose the tempo. The kind of freedom that allows a student to participate in his own rhythm could help to explain the high degree of ensemble that was evident in these classrooms.

We also saw strong evidence of ensemble (which Scollon describes as not just <u>being</u> together but <u>doing</u> together) in the physical movements of

the teachers and the students. In one section of the tape we turned off the sound and, using only visual cues, we found that we could determine, with a high degree of reliability, the tempo of the non-verbal movements of the teacher and the students. We observed movements such as head nods, changes in arm, torso or head position, walking, and turning of pages. We then used these movements instead of stressed syllables to mark the beat and find the tempo. We discovered that just as in the verbal segment, it was the teacher that made the adjustment to a tempo obviously set by the students. In one instance, a teacher is sitting at her desk getting her papers and books ready for a reading lesson. Five children in the reading group are already at the reading table and they are busy reading aloud the words on the board, opening their books, talking with each other and getting up and down in their chairs.

The students are in essence doing reading activities without the teacher and they have a tempo well established before she comes on the scene. When the teacher gets up from her desk (about six feet away from the reading table) and begins to walk over to the students, she does so in exactly the same tempo that the students are using. Her footsteps and arm movements coincide with their beat. She sits down at the table, opens her book, puts her hand toward the board and begins talking using the same rhythm that was established by the children. There is no attempt on the teacher's part to change the pattern already established by the students. It is a very smooth entrance into the group and there is no time or energy lost in the transition.

When relating this incident to a friend who is also a Native Alaska teacher she expressed surprise that any teacher would want to set the pace for the students. She felt far more comfortable coming into her classroom after the students had been there for a while, and indicated that she would feel frustrated if she didn't have a sense of where the students "heads were at" before she started each day. This is very different from the approach expressed by many non-Native teachers, who perceive that it is their role and responsibility to set the stage for what will happen.

In a book called What To Listen For In Music, Aaron Copland, the modern composer, talks about people's discomfort in listening to unconventioral rhythms such as those used by Stravinsky. He says "most listeners feel more 'comfortable' in the well-grooved, time-honored rhythms they have always heard" (1957: 36). Perhaps it is not too far-fetched to suggest that Native students do well in these classrooms taught by Native teachers because they feel comfortable hearing and moving to familiar rhythms. It is possible that there could be a direct relationship between feeling comfortable in a classroom with familiar rhythm patterns and being a successful student.

Other Ways of Tuning-In

Through further discussions and observations of the video tapes and with the use of less formal methods of analysis, we were able to see further evidence of teachers tuning-in to their students in other ways. The examples provided below are not supported by rigid factual data because time did not permit us to perform that kind of in-depth study. However, as we

noted before, we hope that this report will serve to generate further studies of these tapes and/or further video tape studies of other classrooms.

Tuning-In by Listening

Teachers in all three classrooms were able to tune-in to their students because their classrooms were structured in such a way that there was a high percentage of time in which they as teachers were listening instead of talking. (Our perception of what is a "high percentage" is based on educational research literature and personal experience.) By providing quiet time, teachers were not only able to spend time actually listening to their students but they were able to provide an atmosphere that was conducive to studying. We saw several instances of teachers sitting at their desks for long periods of time and not saying anything to the class as a whole. On these occasions the teachers was available to any student as a resource person and as a listener. (It is just this kind of situation, however, that often leads to accusations by administrators or other teachers, that "those teachers never seem to be teaching--they spend time just sitting at their desks.").

In addition to providing time for listening and for studying, these teachers did not bombard their students with directions or instructions, and even discipline was achieved with very little talking. Other studies have indicated that in the average elementary school about 50 percent of class time is spent in getting organized (Gump, 1975). We saw no example of the excess verbalization or interrupting that often occurs in classrooms, nor did we see instances of over-elaboration.

We also observed several smooth and rapid transitions from one classroom activity to another with just a minimum amount of talk from the teacher. In fact, there were times when we as observers had trouble determining just when one activity ended and another began. It was obvious to us, though, that the students were not at all confused. We sometimes referred to this aspect as the "jazz" or "fuzziness" phenomena, because it seemed to capture the feeling one has when listening to jazz music. It is sometimes difficult to know when one portion of the music stops and another begins, and each section seems to slide or glide into the next one without the listener realizing that the transition has occurred. Since it was sometimes hard for us to determine where the boundaries were in the classroom transitions, we can speculate that it might also be difficult or frustrating for other outsiders. This kind of subtle transition can lead to misinterpretations by outsiders and can be incorrectly described as sloppy, indecisive or poor management.

In a separate but related issue we observed that teachers not only did not dominate the classroom with their talk, but neither did they dominate with their physical presence. They did not seem to claim as much time or as much space as many classroom teachers. Other than the teacher's desk, it appeared that the students had an unusual amount of freedom to walk around and they seemed to be able to lay claim to almost as much turf as the teacher. We also noticed that teachers walked in direct paths when they walked from one place to another in the room. They did not detour or

use up much space when they moved. There were many examples of teachers kneeling down by students' desks, and in one classroom the teacher sat at the reading table in a place usually considered to be only for students. In some sections of tape, it was actually difficult for us to find the teacher at all.

These kinds of observations suggest to us that teachers who see part of their role as that of a resource person have a very different kind of relationship with students than do those teachers who always see their role as that of a director. A resource person allows the students to define their specific needs and then responds to them, whereas a director defines those needs himself.

Fine-Tuning: Tuning-In to Individual Students

The video tapes provide us with numerous examples of what we refer to as "fine-tuning," the common practice of the teachers to tune-in to their students as individuals in addition to tuning-in to them as a group. The examples described below are representative of the kinds of fine-tuning practices we observed.

At a general level we noted that the majority of each school day was spent in individual or small group activities rather than whole class activities. As the students worked independently, the teachers would move from student to student while they were working at their tables. As mentioned before, the teachers would almost always kneel or squat down on the floor as they interacted with each student. These individual visits were not the quick-stop variety we sometimes see in classrooms where teachers give a cursory glance, offer a short comment and move on rapidly to the next student. Instead, they involved lengthy discussions of whatever the student was working on. Incidentally, it was interesting to note that the behavior of the class did not change even when there were long periods where the teacher's back was to the whole group.

During small group lessons we could see that teachers were clearly tuned-in to individual strengths and weaknesses. In one instance, at the beginning of a math lesson, the teacher indicated to the group, by naming the children, that each of them was having trouble with a particular part of the math lesson. She was tuned-in to the needs of the students as individuals. This public listing did not appear to be an embarrassment for any of the children since every child in the group was listed. It appeared to be taken as a simple acknowledgement that these areas needed to be worked on, and the teacher made no value judgments about such needs.

In another scene with a math group, five students were responding both collectively and individually to problems that the teacher had on the chalkboard. Although the teacher was facing the board it was readily apparent that she was monitoring who was and who was not answering. Apparently, she was getting her cues from the sounds of the students' voices. Realizing that one child was not responding, she turned to her and asked her to come to the board where she began to work with her independently. She lowered her voice as she began to talk with the student, and this was apparently a signal to the other students that this was going to be a private interaction.

As the teacher and student conversed quietly, the other students obviously knew well what was acceptable behavior during this private time. Although no rules were ever explicitly stated in this scene, it was evident that this kind of "privatizing" occurred often and the students respected such interactions and cooperated by not interfering. They could move quietly at their table but could not talk aloud. When the teacher raised her voice again it was apparently a signal (the only one we could detect) to the rest of the math group that the individual time was concluded and the larger group was once again part of the audience.

These fine-tuning practices imply an attitude of respect and confidence in the students' abilities as individuals. In this way, the teachers are able to pay close attention to each student without the "hounding" appearance that is so often characteristic of teachers.

The Teacher As Conductor

The concluding remarks for this report are based largely on one last musical analogy--the teacher as conductor. Borrowing concepts and terms from the field of music often allowed us to view teaching from a perspective that was not so heavily steeped in or influenced by the traditional boundaries of educational thought.

There is a wide range of styles used by conductors as they conduct or direct a musical group. Some conductors stand in one spot on their podium and make only occasional small arm movements; some conductors move quickly from one side of the stage to another with much visible body movement; some conduct with their eyes closed, while others rely heavily on eye contact. Some use a baton to mark the tempo and others use their hand or nothing at all. A conductor of a jazz band or stage band usually uses a minimum number of signals and a small amount of time to help his group get started, and then he quickly and quietly blends into the group. In a jazz group the conductor is a member of the group who provides direction only when it is necessary. Most people have no problems accepting and appreciating a wide range of styles among conductors as long as the music sounds "good."

In this project our observations and analysis of the teachers in this Athabaskan community suggest that there are actually many different ways of conducting classrooms and of still getting students where we want them. Our findings do not support the idea that there is a particular set of competencies that can be identified as prerequisities to being a good teacher. Instead, the study lends credibility to the notion that there are indeed alternate, but equally valid, styles of teaching.

Athabaskan Teachers and Jazz Band Conductors

We would like to propose a parallel between the teaching styles used by the Athabaskan teachers and the conducting styles used for jazz bands. The use of this anology does not imply that these three teachers taught in exactly the same way. As mentioned before, each teacher did have an individual style but the differences were minor compared to the similarity observed in the way each acted out the role of a teacher.

The role of a jazz band conductor is to help his group get started and to then provide the necessary support. From the information on the video tapes, we see that these teachers "conducted" their classrooms only when necessary. They provided direction and information to the students and then served in a supportive or resource role. They felt no obligation to continually perform for their students. Instead, they used subtle and sometimes, to us, almost imperceptible ways to keep things flowing. They did not occupy a lot of space or use a lot of visible and audible signals to guarantee that their class maintained ensemble. Like the jazz conductor, they often melted right into their group. They were able to provide support and direction with a minimum amount of interference.

In order to be a successful conductor of a jazz band, one needs to be sensitive to the strengths and weaknesses of the individual players and to respect them for their individual abilities as well as their contributions to the group. Without this sense of confidence and respect, we would not have the improvization and solo playing that is integral to what we know as jazz music.

Through a variety of ways of tuning-in, these teachers were able to achieve, and then utilize effectively, an impressive sensitivity to the strengths and weaknesses of individual students, and then follow through with a sincere confidence in their ability to perform. Even the formal and informal evaluation of the student's performance is based on the student's ability to actually perform the task itself and not on some alternate ability, such as providing elaborate verbal explanations of the task. A jazz director and an audience judge musicians on their ability to play the music, not on their ability to verbally describe what they are doing.

It also becomes apparent that it is not the musical score or the curriculum or choice of books that determine the success or failure of the jazz band or the classroom. It is instead the way in which the materials are used that is important. Even the most exciting and relevant piece of music or curriculum is useless unless the relationship between the teacher-conductor and the student-performer is one that will allow them to come together and move in harmony, and thus to achieve ensemble. A well-written curriculum is an asset, but it is not the essential ingredient for success. Just as a conductor would not blame the music for a poor performance, we as teachers cannot use standard curriculum as an excuse for the failure of students to achieve success in a classroom.

Conclusion

This report has provided some subsurface views of the teaching styles of three Athabaskan teachers as they teach Athabaskan children at a school in their home community. We have attempted to uncover some of the hidden features of the interactions that occurred between the teachers and their students. The next step, as we see it, is to ask ourselves the following questions: "What kinds of things do we know now about the teaching styles of Native teachers that we didn't know before?" and "What kinds of things do we still need to know?"

In response to the first question we can state that we do know some things we didn't know before. We can see in these video tapes that the Native teachers are without question "teachers" according to anyone's definition of the term. There are many similarities between the ways in which they teach and in the ways that are described in other educational studies. These teachers' repertoires do include the use of directives, spotlighting, and reprimands, but the frequency with which tney are used is much less, and the rules for using them are different. It is apparently the little (and usually less apparent) differences in these classrooms that make the big difference for the students.

We can see in the video tapes that it is possible to achieve a high degree of student participation and to have a "smooth" classroom with only a minimum amount of directing by the teacher. However, it is only realistic to note that it might be personally uncomfortable for many teachers to refrain from doing the obvious teacher kinds of things, like moving about the room and talking a lot with students, and it is plausible that this kind of behavior could be a professional risk in some situations and could lead to accusations of "not teaching."

We also know now that the teaching styles used by these teachers does not force them to compromise educational standards in any way. Their personal relationship with the students does not interfere with their expectations that the students do as well academically as they are capable.

In response to the second question we can state that this study has provided us with information on three Native teachers in one school in one community. Therefore we cannot generalize from this study but we can use it as a basis for speculating and, more importantly, as bases for generating and developing comparative studies. We have no way of knowing, for instance, whether we can relate the teaching styles of these three people to the fact that they are Athabaskan. Perhaps there is a sense of "Indianness" intrinsic to their way of relating to the students, but until we have studies of Native teachers with non-Native students and of non-Native teachers with Native students we will not be able to make those kinds of generalizations. In addition, we don't know to what degree people can consciously alter or modify their own style of teaching. We do know, though, that in the Erickson-Mohatt study of teachers with Odawa Indian students, a non-Native teacher was able to alter his teaching style in ways that allowed him to be more like his Native colleagues.

Although schools are sometimes characterized as inflexible and standardized institutions, these video tapes suggest that there are alternate routes to successful schooling experiences and these teachers and students were able to pursue these routes to their advantage. In planning for the future, it will be important for school systems and teacher-training institutions to provide school structures and training programs that will be open enough to allow teachers to conduct their classrooms in whatever style is most appropriate for them. We need to provide schooling situations that will allow teachers to tune-in so that students don't tune-out.

Attachment 1: Description of Methodology Used
Excerpt from Tempo, Density and Silence: Rhythms in Ordinary Talk
by Ron Scollon

Details of the Method

1. Taping: recorded audio cassette tapes were made of the event in which I was interested using a Superscope C-105.

2. Transcription: I made full transcipts including all hesitations and pause fillers in standard notation. No phonetic transcriptions were made except of infants who did not yet speak in recognizable adult forms.

3. Marking of stressed syllables: each stressed syllable was underlined. Syllables with very strong stress (e.g., "You big liar!") were doubly underlined. This marking was done on two separate transcriptions at different times. In the first case, the marking of stress syllables was done on the written transciption without hearing the recording. That is, the transcriber's normative system was marked. In the second case, the stressed syllables were marked from the audio recording. These two transciptions were then compared and superimposed. They agreed to a very surprising degree.

4. Timing intervals: the intervals between the strongly stressed syllables, those which were doubly underlined, were timed with a stopwatch.

5. Marking meter: slowing the tape by 20 percent I then listened for a regular metric pattern of stressed syllables and marked them on a third transcript where the other markings did not appear. While at first I made no attempt to determine a typical measure I found it was virtually impossible to hear anything but a slow measure in 2/4 time with one strong downbeat (ˊ) and a lighter upbeat (ˋ). These were marked with an acute accent (´) and a grave accent (`) respectively.

Since this step is the heart of this method it is also the most questionable step and perhaps bears further discussion. I found it much easier to perceive the underlying meter with the tape slowed by 20 percent. This distorts the voices enough that one doesn't hear them as the original participants but at the same time does not lose the phonetic detail necessary to hear them as ordinary speakers. Relatively little relistening was necessary. Most of the relistening was needed to check long intervals of silence.

The central problem is to decide whether or not one's hearing of the meter is some form of superimposing one's expected metric pulses on whatever syllable they happened to fall. Against this there are two checks. The first is that stressed syllables are marked independently, both from the tape and from the written transcription alone. When the downbeats and upbeats also fall on these underlined syllables it at least confirms that the patterns can be perceived from three separate points of view. Here it should also be added that not every stressed syllable falls on one of the beats. In relatively 'dense' speech there are more stressed syllables than beats. This means that the process of listening for the meter is not just another version of listening for stressed syllables.

The second check is much more critical. When the original participants' synchronies fall exactly on these downbeats and upbeats it is, I believe, convincing to argue that one has recorded the metric system being used by the original participants to organize their interaction.

6. Counting the beats: add up all of the beats for the whole sample.

7. Time whole sample: with a stopwatch I timed the elapsed real time of the sample.

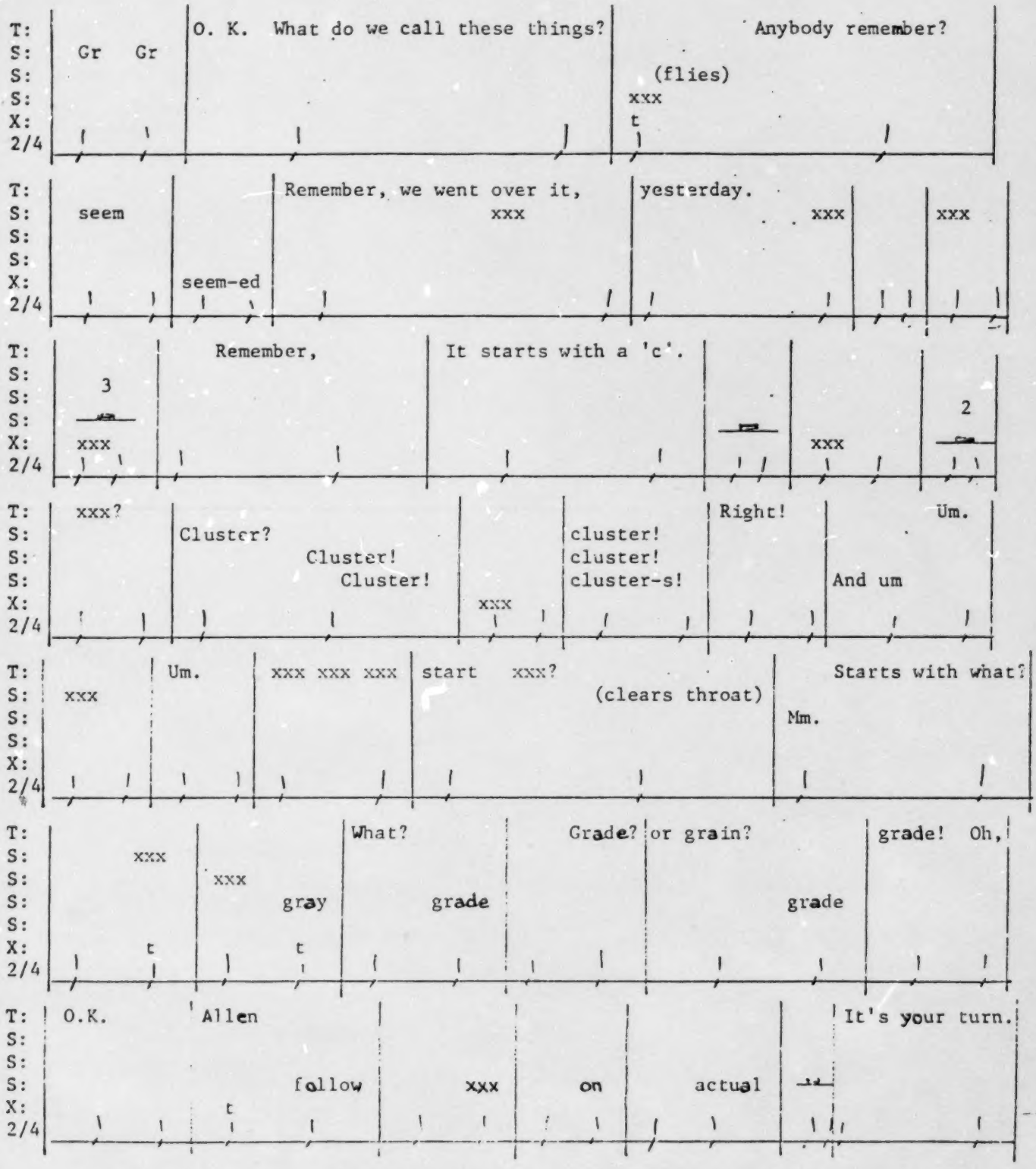
8. Calculate beats (♩) per minute:

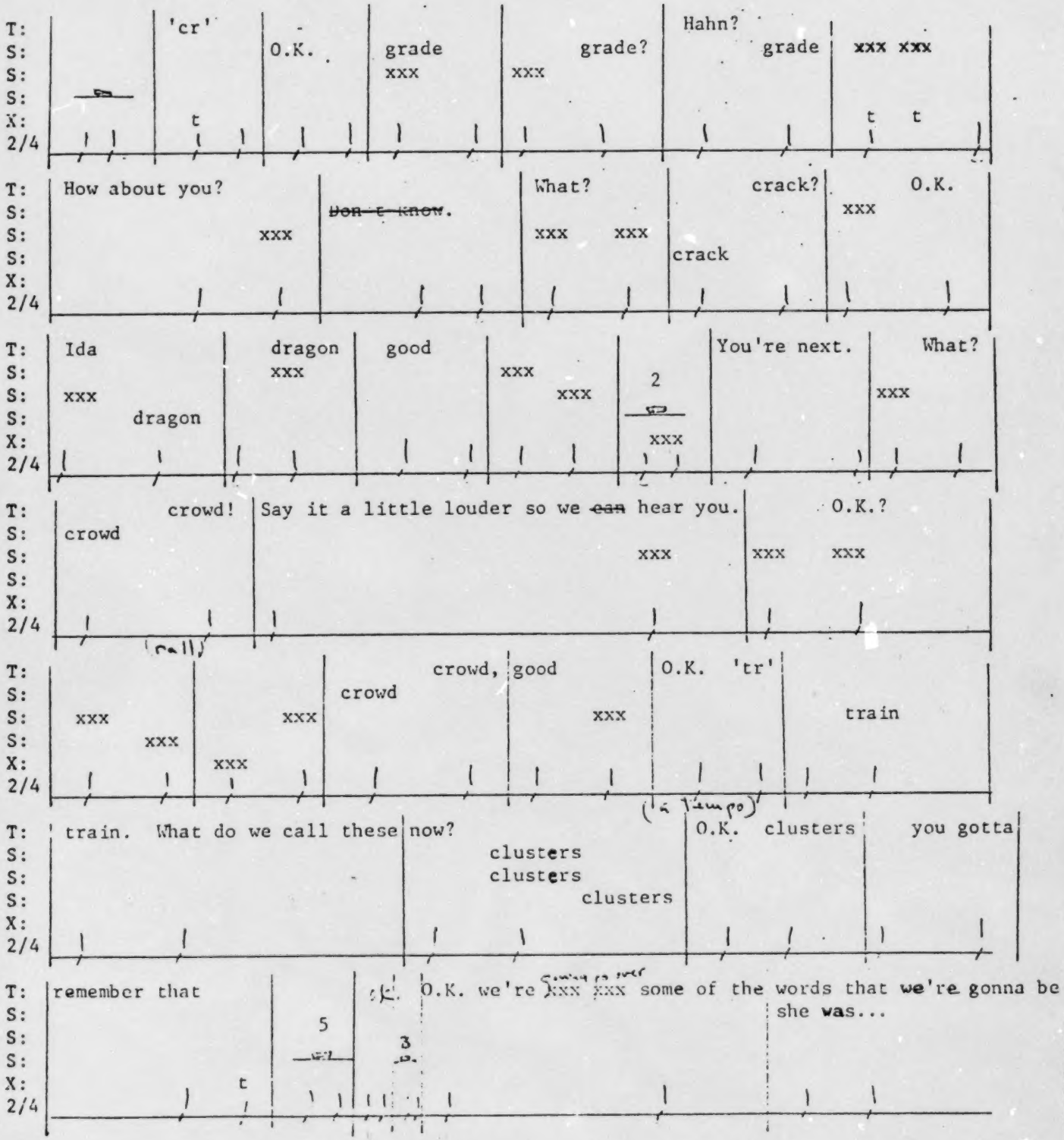
9. Compare with (4): now counting the number of beats between heavily stressed syllables it is possible to determine an interval between beats or a measure length. This has also been calculated in (8). These two independent values are compared. They should be the same.

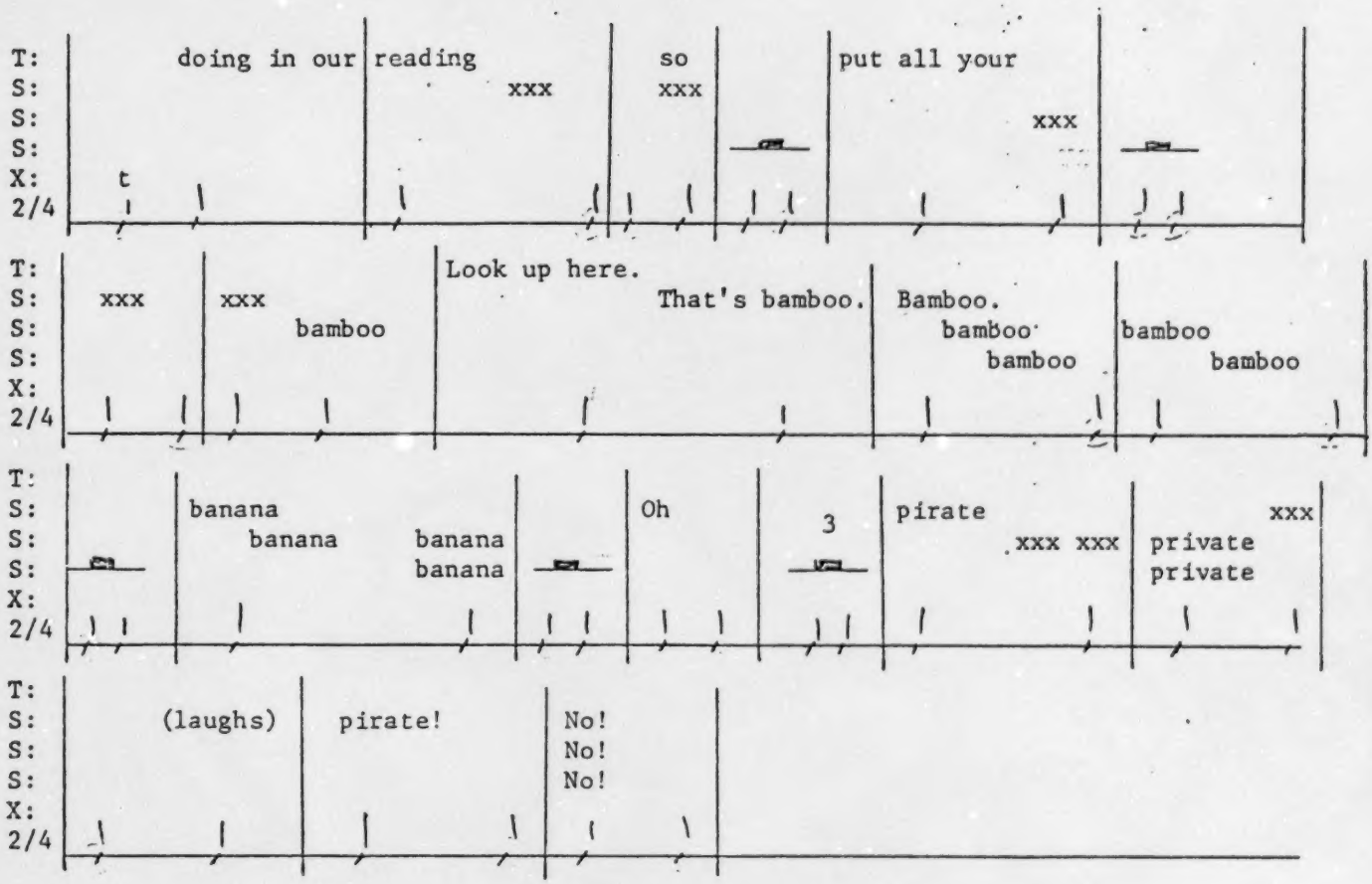
10. Repeat 1-9 for major sections: ideally this step should be carried out by independent judges for each sample. In this case I have done my own re-analyses and found only fractional differences across larger samples. The time elapsed between separate analyses was about one month.

11. Prepare score transcripts: a quasi-musical score is the final presentational outcome of this process.

Attachment 2: Example of Score Transcript from Classroom Vocabulary Lesson




T: 'cr' O.K. grade grade? Hahn? grade xxx xxx
S: xxx xxx
S:
X: t t t
2/4
T: How about you? What? crack? O.K.
S: Don't know. xxx
S: xxx xxx xxx
S: crack
X:
2/4
T: Ida dragon good You're next. What?
S: xxx xxx xxx
S: xxx xxx
S: dragon 2 xxx
X: xxx
2/4
T: crowd! Say it a little louder so we can hear you. O.K.?
S: crowd xxx xxx xxx
S:
X:
2/4
(call)
T: crowd, good O.K. 'tr'
S: crowd
S: xxx xxx xxx train
S: xxx
X: xxx
2/4
(a tempo)
T: train. What do we call these now? O.K. clusters you gotta
S: clusters
S: clusters
S: clusters
X:
2/4
T: remember that O.K. we're xxx xxx some of the words that we're gonna be
S: she was...
S: 5 3
X: t
2/4



115 measures
230 beats
151.4 seconds (= 2.52 min.)
Tempo = 91.3 beats/minute

98 silent beats
% silent = 42.6%

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